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Using a Social Network Approach to Improve Participatory Research for Conservation Agriculture:

Initial Findings from the Mt. Elgon Region

Presented by: Jennifer N. Lamb
Changes in Technology Transfer and International Agricultural Research

- Participation as the dominant paradigm
- Innovation Systems Perspective
- Increasing complexity of agro-technologies
  - Serving multiple purposes
    - Food security, climate change mitigation
- Progress in Participation
  - Farmer field school engages
  - Yet, focus is still linear.
- Limits capacity for co-innovation
Using social networks to study co-innovation processes

- Networks in the development context:
  - Adoption studies
  - Natural resource management
- Use networks to explore relationships and idea development
  - Professional structures (Wolf, 2006)
  - Measure
    - Network structure
    - Attitudes and beliefs of network members
Research Context

- Partnering with a participatory Conservation Agriculture Project for Smallholders (CAPS) (University of Wyoming, 2010)
- Four locations
  - Kapchorwa/Kween (Uganda)
  - Tororo (Uganda)
  - Trans-Nzoia (Kenya)
  - Bungoma (Kenya)
- Now half way through project
- Draw on baseline data
- Feedback workshops with participants
CAPS as a multi-purpose technology

- Three Principles based in adaptive knowledge:
  1. Minimize soil disturbance
  2. Maintain a permanent soil cover
  3. Rotate and mix crops

- Goals:
  - Improve food security through stabilizing yields
  - Reduce erosion
  - Improve fertility
  - Sequester carbon/reduce greenhouse gas emissions
Key Contributions

- Project management:
  - Building trust
  - Improving participatory research

- CAPS Technology Development:
  1. Revealing differences between perceived and reported network contacts
  2. Ill-informed perspectives about the beliefs of others
  3. Problems regarding actual agricultural technologies

Developing partnerships for network field research in 2011
Project Management

- Building trust with social science researchers
- Increasing legitimacy of participatory research
  - Farmers and service providers recognized personal role in generating the network
- Maintaining interest beyond direct participants
  - Engaging local advisory committees

The network workshops brought together many members of the local advisory committees for the first time since the start of the project.
Revealing differences in perceived and reported network contacts

- Extension not in the top 25% in Uganda for resources
- Conflicts with resource distribution mandate
- Agrovets as the primary contact
- Various reactions
- Priority setting
  - Increasing contacts for Tororo farmers
  - Farmer group leaders desire to expand their reach

**Example:** Most frequently reported resource contacts in Tororo, Uganda

<table>
<thead>
<tr>
<th>Agent Type</th>
<th>Number of Reports (Out of 93)</th>
<th>Percentage of Farmers Reporting Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veterinary Service provider</td>
<td>40</td>
<td>43%</td>
</tr>
<tr>
<td>Neighbor/friend</td>
<td>38</td>
<td>41%</td>
</tr>
<tr>
<td><strong>Vendor in a agro-vet shop</strong></td>
<td><strong>37</strong></td>
<td><strong>40%</strong></td>
</tr>
<tr>
<td>Vendor in weekly market</td>
<td>29</td>
<td>31%</td>
</tr>
<tr>
<td>NGO/ Development Agent</td>
<td>18</td>
<td>19%</td>
</tr>
<tr>
<td>Family Member</td>
<td>17</td>
<td>18%</td>
</tr>
<tr>
<td>Vendor in a shop in urban center</td>
<td>13</td>
<td>14%</td>
</tr>
<tr>
<td>Leader of farmer organizations</td>
<td>11</td>
<td>12%</td>
</tr>
<tr>
<td>Leader of women’s organization</td>
<td>11</td>
<td>12%</td>
</tr>
<tr>
<td>Village/Subcounty chief</td>
<td>9</td>
<td>10%</td>
</tr>
<tr>
<td>Agricultural/Micro Finance Representative</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td>Teacher in village</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Government Parastatals</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Agricultural researcher</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Leader of youth organization</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Minister/Priest/Imam in village</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Government Extension agent</strong></td>
<td><strong>0</strong></td>
<td><strong>0%</strong></td>
</tr>
<tr>
<td>Tractor owner/ animal traction provider</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Local Political leaders</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Resources include: seed, fertilizer, agrochemicals, plowing services, loans, land, cash, etc.
Misunderstanding about the perceptions of others

- Farmers often more receptive to CA than believed by the service sector
  - Crop rotation in Tororo
  - Belief that tillage causes land degradation in Kapchorwa
- Relating farmer knowledge and practice
  - Bungoma: practice is knowledge
  - Kitale: evolutionary relationship

In Kapchorwa, Uganda farmers recognize the damage from plowing, but it continues to be the dominant practice.
Identifying Challenges to CA

- Herbicide use in Tororo
  - Participants concluded need to expand network to involve regulatory authority
- CA as a hand technology

A host farmer in Kitale, Kenya shows the research team a minimum disturbance hoe he designed in his home shop.
Managing Expectations

- Linear expectation not just from the side of development agents, but farmers too!
  - Expect a finished product
- Changing how we talk about networks for CA
  - A learning process, but the project is catching on.
  - Spontaneous adoption
- Evidence that a network approach can make valuable contributions
  - Project management
  - Technology development
Thank you!
Comments or Questions?